

INVESTIGATION OF HEAVY METALS AND TRACE ELEMENTS CONTENT IN DIFFERENT TYPE OF BISCUITS

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Abstract

Interest in bakery products is growing from day to day due to the nutritional quality of these products. Biscuits are the most versatile snack in the food industry, occupying a notable position due to their attractive characteristics. The aim of this paper is to review available literature for conducting a comparative study of the heavy metals and trace elements concentrations found in the composition of several types of biscuits, from different areas of the world.

Biscuits are preferred by children and can be given as expressions of love from friends or family. They are nutritious, cheap, and convenient products, having different forms and being produced by combining flour, sugars, oils or vegetable fats and proteins. By comparing the data from more than 50 papers available on WoS, Springer, SCOPUS and CAB Abstracts we found that potential environmental contaminants with effects on human health can occur in biscuits in the technological flow, but also from the raw materials used to obtain them. The main source of biscuits contamination is represented by the flour. Contamination may occur with metals such as cadmium, lead, zinc, chromium, copper, manganese, iron can be due to the fertilizers and pesticides used in wheat cultivation. In recent decades the effects that these contaminants have had on the quality of crops have threatened food security, which can disrupt metabolism once they reach inside the human body.

The metals and trace elements are present, in generally, at low concentration in biscuits sample, except for some metals in some type of biscuits, in different studies.

Key words: Biscuits, Contaminants, Heavy metals, Trace elements.